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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,298	05/17/2005	Mark Jozef Willem Mertens	NL 021458	5801

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EXAMINER

LEE, PING

ART UNIT	PAPER NUMBER
2615	

MAIL DATE	DELIVERY MODE
07/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/535,298	MERTENS ET AL.
	Examiner	Art Unit
	Ping Lee	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 June 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____. _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orbannes et al (hereafter Orbannes) (US 6,785,667).

Regarding claims 1 and 8-10, Orbannes discloses a data representation apparatus for representing data by means of an audio signal. In one embodiment, Orbannes teaches that the system would respond to voice commands (reads on the claimed positionless data, with different commands correspond to the first value and the second value). See col. 37, lines 60-64. In another embodiment, Orbannes teaches that the audible sound is generated by mapping a first action (for example, zoom in) to a first position in a three-dimensional space, and the second action to a second position (col. 38, lines 6-8) and the audio processing unit changes the characteristic of the audio signal (col. 38, lines 2-15).

However, Orbannes fails to show that the two embodiments could be combined together. Based on Orbannes' teaching about directional control in response to the voice recognition (col. 37, lines 60-64), one skilled in the art would have expected that the same benefit could be applied to the sound effect simulating the virtual environment by controlling the zooming function using the voice commands. Using the voice commands, the user's hand would be free from the keyboard, mouse or other hand-related input device. Thus, it would have been obvious to one of ordinary skill in the art

to modify Orbannes by utilizing the voice recognition capability to control the sound effect simulating the virtual environment in order to free the user's hand from the input device.

Regarding claim 3, the claimed measurement device reads on microphone.

Regarding claim 4, the example provided on col. 38 is a street in a city, wherein the street has a predetermined region in a three-dimensional space, the voice commands would be mapped to the space.

Regarding claim 5, depending on how the user controls the direction (such as pan left, pan right, zoom in, zoom right), the positionless data signal would be mapped on a curvilinear locus in three-dimensional space.

Regarding claim 6, the claimed specification means reads on the user input selection, and the claimed preferred mapping reads on the preferred street to be viewed.

Regarding claim 7, the claimed selection means reads on the means allowing the user to select different map area, the first type of the audio signal represents the audio in the first area, and the second type of the audio signal represents the audio in the second area.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orbannes as applied to claim 1 above, and further in view of Courneau et al (hereafter Courneau) (US 5,987,142).

Regarding claim 2, Orbannes fails to show that a filter applying a HRTF to the input audio signal to obtain the output audio signal appearing to originate from the first position to the second position. Orbannes teaches that the sound would simulate the

virtual environment. However, no specific sound processing algorithm is being disclosed. One skilled in the art would be motivated to search the art related to virtual sound simulation. Adjusting only volume would not produce a realistic virtual environment. Courneau teaches that the HRTF is being used to simulate the virtual sound environment. HRTFs are functions describing the delay, the frequency response and the amplitude response of the sound at the two ear drums of the user. Thus, it would have been obvious to one of ordinary skill in the art to modify Orbanes in view of Courneau by using a filter as a function of HRTF to generate audio signal in order to simulate a more realistic sound effect in a virtual environment.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 8 and 9 have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ping Lee
Primary Examiner
Art Unit 2615

pwl